

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 July 2005 (21.07.2005)

PCT

(10) International Publication Number
WO 2005/066152 A1

(51) International Patent Classification⁷: **C07D 333/40**,
A61K 31/381, A61P 35/00, G01N 33/68

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(21) International Application Number:
PCT/US2004/043950

(22) International Filing Date:
29 December 2004 (29.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/533,720 30 December 2003 (30.12.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

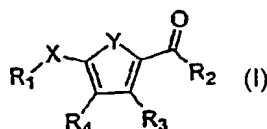
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: THIOPHENE DERIVATIVES FOR UP-REGULATING HLA-DM ACTIVITY



(57) Abstract: Compounds of formula (I), compositions, methods and kits are provided. The compounds and compositions may be particularly useful for modulating immunological responses. Formula (I) wherein, R₁ is alkyl, aryl, or heterocyclyl; R₂ is H, alkyl, aryl, heterocyclyl, OR₃ or N(R₃)₂, R₃ is H, alkyl, aryl, or heterocyclyl; R₄ is H, CN, halogen, CF₃, CO₂R₃, or C(O)N(R₃)₂; X is S, SO₂, O, or NR₃; and Y is S, O, or NR₃.

WO 2005/066152 A1